Pennsylvania **Grade 5**

LineUp With Math™ Alignment
Academic Standards for Mathematics

2.2 Computation and Estimation	
2.2.5 Grade 5 Standard	***LineUp With Math*™ Activities**
G. Apply estimation strategies to a variety of problems including time and money.	--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.

2.3 Measurement and Estimation	
2.3.5 Grade 5 Standard	***LineUp With Math*™ Activities**
A. Select and use appropriate instruments and units for measuring quantities (e.g., perimeter, volume, area, weight, time, temperature).	--Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts.
B. Select and use standard tools to measure the size of figures with specified accuracy, including length, width, perimeter and area.	--Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts.
C. Estimate, refine and verify specified measurements of objects.	--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.
D. Convert linear measurements within the same system.	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.

2.4 Mathematical Reasoning and Connections	
2.4.5 Grade 5 Standard	***LineUp With Math*™ Activities**
B. Use models, number facts, properties and relationships to check and verify predictions and explain reasoning.	--Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts.
C. Draw inductive and deductive conclusions within mathematical contexts.	--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.

2.5 Mathematical Problem Solving and Communication	
2.5.5 Grade 5 Standard	***LineUp With Math*™ Activities**
A. Develop a plan to analyze a problem, identify the information needed to solve the problem, carry out the plan, check whether an answer makes sense and	--Explore and apply a variety of strategies to optimize the solution of air traffic control conflicts.

explain how the problem was solved.	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.
B. Use appropriate mathematical terms, vocabulary, language symbols and graphs to explain clearly and logically solutions to problems.	--Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts. --Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.
C. Show ideas in a variety of ways, including words, numbers, symbols, pictures, charts, graphs, tables, diagrams and models.	--Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts. --Choose and apply a variety of strategies to optimize the solution of air traffic control conflicts.
D. Connect, extend and generalize problem solutions to other concepts, problems and circumstances in mathematics.	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.
E. Select, use and justify the methods, materials and strategies used to solve problems.	--Choose and apply a variety of strategies to optimize the solution of air traffic control conflicts.
F. Use appropriate problem-solving strategies (e.g., solving a simpler problem, drawing a picture or diagram).	--Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts.

2.11 Concepts of Calculus

2.11.5 Grade 5 Standard	***LineUp With Math™* Activities**
D. Describe the relationship between rates of change and time.	--Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts. --Identify and resolve distance, rate, time conflicts in air traffic control problems by varying plane speeds or changing plane routes.